

## Project Experience

### **Water SCADA/Telemetry System Design and Construction Support Services, SCADA System Radio Telemetry Licensing Support Services, and Follow-On Support Services City of Modesto, Modesto, CA**

This \$2.5M system, which has been on line since March 1994, supports the City of Modesto's water and wastewater utilities. It uses dual VAXstation computers, five remote workstations and 160 RTUs. Telemetry consists of two channels of 900 MHz MAS radio with 960 MHz point-to-point microwave interconnecting the two master radio sites. The project included control room design, instrument upgrades, and special control applications software to support the City's conjunctive water use program.



Timberline designed additions to the system to support the City's acquisition of a private water company with evolution to a regional system by adding 50 more production wells. Installation took place in three separately contracted phases. The additions continue the concepts of sharing computer and telemetry resources, direct and ready access to operating conditions, continuous monitoring of equipment status and alarm conditions, remote setpoint adjustment to manage changing conditions, and rapid reporting and response to emergencies.

After the original project, Timberline provided follow-up support with the design and integration of a solar-powered river gauging station on the San Joaquin River into the SCADA system. By monitoring river flows and temperatures, this addition improves management of effluent discharge from the secondary treatment plant. In addition, on behalf of the City, Timberline obtained an FCC license in the new 932/941 MHz frequency band. For the site, located near Salida, California, Timberline was responsible for data gathering, map studies, coverage analyses, frequency coordination, and preparation and tracking of the FCC license application package. The latter included FCC transmittal and justification letter, completed new FCC Form 601, system description and frequency coordination statements.

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